MontCAS

Guide to the 2011 Criterion-Referenced Test and CRT-Alternate Assessment Reports

Important Phone Numbers

If you require assistance, it's readily available through the offices listed below.

- **For information about program policy issues or incorrect data, contact:**
  Judy Snow, State Assessment Director
  Phone: (406) 444-3656
  E-mail: jsnow@mt.gov

- **For information about CRT program administration or shipping issues, contact:**
  Dan Verdick, Montana CRT Program Manager
  Phone: (800) 431-8901, Extension 2220
  E-mail: verdick.dan@measuredprogress.org

- **For information on CRT-Alternate policy issues, contact:**
  Timothy Harris, OPI
  Division of Special Education
  Phone: (406) 444-4429
  E-mail: tharris@mt.gov

- **For information about CRT-Alternate program administration or shipping issues, contact:**
  Tim Greenlaw, Montana CRT-Alternate Program Manager
  Phone: (800) 431-8901, Extension 2309
  E-mail: greenlaw.timothy@measuredprogress.org

- **For information about ELL/LEP, contact:**
  Lynn Hinch, OPI
  Phone: (406) 444-3482
  E-mail: lhinch@mt.gov

- **For information about Title I, contact:**
  B.J. Granbery, OPI
  Phone: (406) 444-4420
  E-mail: bgranbery@mt.gov

- **For information about students with migrant status, contact:**
  Angela Branz-Spall, OPI
  Phone: (406) 444-2423
  E-mail: angelab@mt.gov

Montana
Office of Public Instruction
Denise Juneau, State Superintendent

opi.mt.gov

The primary purpose of this guide is to support local educators' use of test data to better serve the academic needs of students and to evaluate and improve curriculum and instruction. We hope you find this guide useful as you review the results for your school or system.

If you have any suggestions about ways in which we can improve this guide in future years or if you have questions after reviewing this guide or its reports, please contact Judy Snow, State Assessment Director, Office of Public Instruction (OPI) at (406) 444-3656 or jsnow@mt.gov.

Additional information about the Criterion-Referenced Test (CRT) and the CRT-Alternate Assessment, including Montana's content standards, can be found in Appendix A of this manual and on OPI's Web site, www.opi.mt.gov.

TABLE OF CONTENTS

The Test

The Criterion-Referenced Test (CRT) and the CRT-Alternate Assessment are designed to measure student acquisition of the knowledge and skills in Montana's content standards for reading, mathematics, and science. The assessments in reading, mathematics, and science were developed to provide information at the student, class, school, and system level.

Basis for Results

CRT

In the CRT, the pool of test items in each grade and subject area was divided into two categories:

1. The first category of items is common items that appeared in all forms of the test and were completed by all students. Student, school, system, and state results are based only on these common items; 50% of all common items are released annually at the time the reports are shipped to system test coordinators and posted on the Office of Public Instruction (OPI) Web site (www.opi.state.mt.gov).

2. The second category of items is field test items. The remaining items in a grade/subject area were divided among four different forms of each test; each student completed one form. These items are called field test items. A portion of the 2011 field test items will become the set of common items in spring 2012.

CRT-Alternate Assessment

The CRT-Alternate Assessment is a point-in-time test that examined how students performed in relation to performance indicators that were expanded from the Montana reading, mathematics, and science standards and benchmarks. Students participated in a series of age-appropriate short activities consisting of five or six test items each for which test administrators were given a script, written directions, and scaffolding levels. Students were encouraged to engage in the activities and showed performance on the indicators through appropriate prompting by the test administrator.

The test administrator observed and scored the student's performance on each indicator. Some items required administrators to record the sequence of responses. Forms were provided for all required recordings.

Minimum Number of Students Needed to Generate Reports

To ensure confidentiality of individual student results and to discourage generalizations about school performance based on very small populations, OPI has established 10 as the minimum number of students for which performance-level results are reported in any particular subgroup. Only the number of students ("N") in each subgroup are reported on the system and school reports.

Consequently, schools with a very small number of students enrolled in a grade that

was tested may not show performance-level results in some sections of their school report. A school report was generated for any school that tested fewer than 10 students in a particular grade, and results for these students are included in system- and/or state-level results.

STUDENTS ELIGIBLE FOR EXCLUSION FROM SCHOOL, SYSTEM, AND STATE REPORTS

All students in accredited schools are required to participate in either the CRT or the CRT-Alternate Assessment; however, the scores of the students in the following categories were excluded from the calculation of averages:

- LEP students enrolled for the first time in a U.S. school,
- foreign exchange students,
- students not enrolled (for example, home-schooled students),
- students enrolled less than 180 hours and taking a reading, mathematics, or science course,
- students enrolled in a private accredited school,
- students enrolled in a private non-accredited school, and
- students enrolled in a private non-accredited Title 1 school.

THE SCORES

Two types of scores are used to report performance on the CRT and the CRT-Alternate Assessment—scaled scores and percentages.

SCALED SCORES

Results are reported according to levels that describe student performance in relation to Montana's established state standards: Advanced (A), Proficient (P), Nearing Proficiency (NP), and Novice (N). Scaled scores in each content area range from 200 to 300. Scaled scores supplement the performance-level results by providing information about the position of a student's results within a performance level.

School- and system-level scaled scores are calculated by computing the average of student-level scaled scores. Students' total number of points on the test are translated into scaled scores using a data-analysis process called scaling. Using scaled scores greatly simplifies the task of understanding how a student performed. Scaled scores are calculated along with a standard error of measurement (indicated on the chart by a gray bar surrounding the student's score), representing the probable range of scores for the student if he or she were to take the test many times.

PERCENTAGES

Percentages are another way to report the results of the test. "Percentage" refers to the percentage of questions answered correctly; the percent correct is simply the percentage of test questions that each student answered correctly.

It is important to note that the "percentage" correct does not directly correlate to the scale score. For more information, see Appendix A.

CRT AND CRT-ALTERNATE REPORTS

The following reports of student, school, and system results are each provided for the CRT and the CRT-Alternate Assessment.

Report	Description	Explanation and sample can be found in this interpretive guide on page(s):	Method of Delivery
Student Report	This parent/guardian report provides each student's scores for the reading, mathematics, and science tests.	CRT: 4–5 CRT-ALT: 13–14	• Hard copy shipped to system test coordinator • MARS*
Roster & Item-Level Report	This report provides information about class performance. Each student in the class is listed on the roster, which includes references to each item and the standard it measures.	CRT: 6 CRT-ALT: 15	MARS
School Summary Report	This three-part summary shows the distribution of scores in each Montana performance level by subgroup, school, system, and state for students enrolled in the school or system for the entire academic school year.	CRT: 7–9 CRT-ALT: 16–18	MARS
System Summary Report	This two-part summary shows the distribution of scores in each Montana performance level by subgroup, system, and state for students enrolled in the school or system for the entire academic school year.	CRT: 7–9 CRT-ALT: 16–18 Separate sample not included. See School Summary Report sample.	MARS

*MARS (the Montana Analysis and Reporting System) is the secure online reporting system used for delivery of CRT and CRT-Alternate test results. If you need assistance accessing MARS, contact the OPI assessment staff. (Contact information is provided on the inside of the cover page of this document.)

PART I: THE CRT REPORTS

CRT STUDENT REPORT

This parent/guardian report provides each student's scores for the reading, mathematics, and science tests. The chart on the back of the Student Report, "Your student's performance level and score in each content area," reflects the student's performance level—Ⓐ— and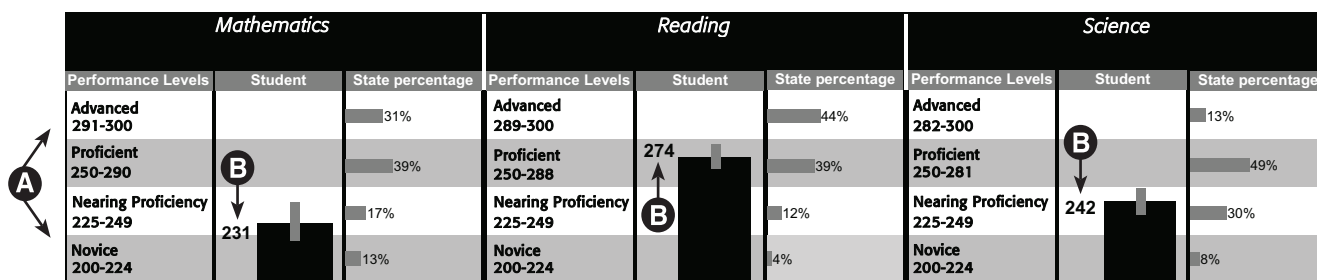 scaled score—Ⓑ—for reading, mathematics, and science. The gray bar surrounding the student's score represents the standard error of measurement. Below the chart is a detailed description of your student's performance in each content area—Ⓒ. Please refer to the performance-level descriptors on the front of the Student Report or on page 10 in this guide for additional information and resources.

Your student's performance level and score in each content area

Display of scores and probable range of scores

In the figure below your students performance is displayed. For each subject, the left column lists the possible performance levels with the scores needed to achieve those levels. The center column is your student's performance where the black bar is their score and the small grey bar is the range of scores they might have achieved had they taken the test multiple times. The right hand column is the percentage of students that achieved each performance level on the CRT across the state.

Example:
Your child's --> 240
score
<-- Range of likely scores if your child took the test many times

Mathematics			Reading			Science		
Performance Levels	Student	State percentage	Performance Levels	Student	State percentage	Performance Levels	Student	State percentage
Advanced 291-300		31%	Advanced 289-300		44%	Advanced 282-300		13%
Proficient 250-290	Ⓑ	39%	Proficient 250-288	274	39%	Proficient 250-281	Ⓑ	49%
Nearing Proficiency 225-249		17%	Nearing Proficiency 225-249	Ⓑ	12%	Nearing Proficiency 225-249	242	30%
Novice 200-224	231	13%	Novice 200-224		4%	Novice 200-224		8%

Your student's Mathematics Scaled Score is **231** which is at the **Nearing Proficiency Level.** Your student's possible range of scores is from 221 to 241.

Students at this level demonstrate a partial understanding of subject matter and are able to:
- Select and use problem-solving strategies to solve two-step problems involving the four operations and communicate strategies with limited organization or support information.
- Read, identify, and interpret place value of numbers to 100,000.
- Solve addition and subtraction problems with whole numbers and decimals with limited regrouping.
- Multiply three-digit numbers by one-digit numbers with multiple regroupings.
- Divide by one-digit divisor.
- Add and subtract simple fractions with common denominators and models.
- Use and apply strategies and procedures to solve algebraic problems involving equations, number patterns, geometric patterns, and change.
- Use properties and limited vocabulary to describe and identify two- and three-dimensional figures.
- Solve geometric problems involving symmetry, transformations, visual and spatial reasoning and describe direction and position using the cardinal directions.
- Select and apply appropriate units, tools, and simple formulas to use in everyday measurement situations.
- Collect, organize, display, read, and interpret data; judge the probability of a simple event as impossible, unlikely, likely, or certain; and determine which outcome is most or least likely.

Your student's Reading Scaled Score is **274** which is at the **Proficient Level.** Your student's possible range of scores is from 264 to 284.

Students at this level demonstrate a solid understanding of challenging subject matter and solve a wide variety of problems. Using grade-level text, the student is able to:
- Use appropriate reading vocabulary.
- Understand main idea and support with details.
- Use prior knowledge to make meaning of text.
- Read a variety of materials.
- Understand personification, figurative language, and literary devices.
- Distinguish fact from opinion; and make inferences.
- Identify author's purpose.
- Read maps and diagrams.
- Interpret and respond to text.
- Analyze and organize information.
- Compare and contrast.
- Reread to find information.
- Justify predictions.
- Use resource materials.
- Describe reading successes and set reading goals.

Your student's Science Scaled Score is **242** which is at the **Nearing Proficiency Level.** Your student's possible range of scores is from 235 to 249.

Students at this level demonstrate a partial understanding of subject matter and are able to:
- With step-by-step direction and the appropriate tools, identify and describe a simple, safe investigation, and identify that observation is a key inquiry process used by Montana American Indians.
- With direction, effectively use tools for simple measurement of solids, liquids, and gases, naming some properties of each state of matter and naming components of basic physical and mechanical systems.
- With direction, identify some biotic (living) and abiotic (non-living) objects; group objects based on common attributes; provide basic descriptions of structure, function, and processes of a system.
- With direction, identify and describe some of Earth's features and recognize simple, observable changes of those features.
- With direction, identify some interactions among technology, science, and society.
- With direction, discuss how science plays a role in current events and local problems.
- With direction, identify some of the historical significance of scientists; with direction, identify the impact of their discoveries on humans today; and, with direction, identify influences of science and technology on the development of Montana American Indian cultures.
- With direction, identify some examples of Montana American Indian contributions to scientific and technological knowledge.
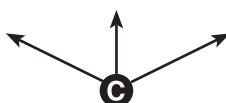
The chart on the back of the Student Report, "Scores on Montana Content Standards," shows the standard for each content area assessed—**D**, points possible for the number of items (or questions) given—**E**, the raw score points earned by the student—**F**, and the range of points on that standard earned by students in Montana who achieved proficiency or above—**G**.

Scores on Montana Content Standards

CRT results are reported for Montana Content Standards in Mathematics, Reading, and Science to provide standard-specific information about the student's achievement. The results can be used to show the student's relative performance on the standards within a content area.

	E Total Possible Points on the Test	**F** Points Earned by Your Student	**G** Range of Points Earned by Students who have achieved proficiency in the State
Mathematics			
1. Problem Solving	This standard is assessed within the frameworks of standard 2-7.		
2. Numbers and Operations	XX	XX	XX-XX
3. Algebra	XX	XX	XX-XX
4. Geometry	XX	XX	XX-XX
5. Measurement	XX	XX	XX-XX
6. Data Analysis, Statistics, and Probability	XX	XX	XX-XX
7. Patterns, Relations, and Functions	XX	XX	XX-XX
Reading	**Total Possible Points on the Test**	**Points Earned by Your Student**	**Range of Points Earned by Students who have achieved proficiency in the State**
1. Students construct meaning as they comprehend, interpret, and respond to what they read.	XX	XX	XX-XX
2. Students apply a range of skills and strategies to read.	XX	XX	XX-XX
3. Students set goals, monitor, and evaluate their reading progress.	This standard is not measurable in a statewide assessment.		
4. Students select, read, and respond to print and nonprint material for a variety of purposes.	XX	XX	XX-XX
5. Students gather, analyze, synthesize, and evaluate information from a variety of sources, and communicate their findings in ways appropriate for their purposes and audiences.	XX	XX	XX-XX
Science	**Total Possible Points on the Test**	**Points Earned by Your Student**	**Range of Points Earned by Students who have achieved proficiency in the State**
1. Scientific Investigations	XX	XX	XX-XX
2. Physical Science	XX	XX	XX-XX
3. Life Science	XX	XX	XX-XX
4. Earth/Space Science	XX	XX	XX-XX
5. Impact on Society	Subscores are not reported for this standard.		
6. Historical Development	Subscores are not reported for this standard.		

D (arrow pointing to the standards column)

CRT ROSTER & ITEM-LEVEL REPORT

The Roster & Item-Level Report is presented by content area, and can be found on the Montana Analysis and Reporting System (MARS). It provides information about student and class performance and can be viewed online or downloaded in a variety of formats. Each student in the class is listed on the roster. Each released item on the test—Ⓐ, the Montana content standard each item is measuring—Ⓑ, the depth of knowledge—Ⓒ, the item type—Ⓓ, the correct response—Ⓔ, and the total number of possible points—Ⓕ—are presented along the top of the roster. Beside the name of the student and the student ID is the response the student chose for the item if the item was answered incorrectly—Ⓖ. If the item was answered correctly, a plus sign is printed. The columns on the right present the raw score on each standard—Ⓗ, the total points on the CRT—Ⓘ, the scaled score for each student—Ⓙ, and the performance level—Ⓚ—the student attained.

When the report is downloaded in PDF format, it lists the average scores for students in the group—Ⓛ, school—Ⓜ, system—Ⓝ, and state—Ⓞ—who answered each item correctly. A legend, with performance-level descriptors, is located on page 10 in this guide.

Confidential
Roster and Item-Level Report
Reading
[custom title]

System:	XX
School:	XXX
Grade:	XX
Date:	XX	Page: XX

	Released Items		Total Test Results	Ⓘ	Ⓙ	Ⓚ
Ⓐ→ Released Item Number	X X		Ⓗ Points Earned by Standard on CRT			
Ⓑ→ Content Standard	X X		Standard 1 / Standard 2 / Standard 4 / Standard 5	Total Points Earned on CRT	Scaled Score	Performance Level
Ⓒ→ Depth of Knowledge Code	X					
Ⓓ→ Item Type	X					
Ⓔ→ Correct MC Response	X					
Name/Student ID Ⓕ→ Total Possible Points	X		X X X X	X		
XX XX Ⓖ→	X X X X X X X X X X X X X X X X X X X X X X X X X X X		X X X X	X	X	X
X		X		X		
Ⓐ Released Item Number	X X					
Ⓛ Percent Correct/Avg. Score: Group	X		X X			
Ⓜ Percent Correct/Avg. Score: School	X		X			
Ⓝ Percent Correct/Avg. Score: System	X		X			
Ⓞ Percent Correct/Avg. Score: State	X		X			

2011 MontCAS CRT and CRT-Alternate Interpretive Guide

CRT School and System Summary Reports

The School and System Summary Reports (example on page 8) are presented by content area and provide information at the school and system level. These reports can be found on MARS. The first chart, "Distribution of Scores" —Ⓐ, shows the distribution of scores in each performance level: Advanced (A), Proficient (P), Nearing Proficiency (NP), and Novice (N). The first column, "Scores" —Ⓑ, represents the scaled score.

The "School," "System," and "State" columns are each divided into three columns that represent the number of students ("N") and the percentage of students receiving each scaled score point—Ⓒ. The last column, "% of Students in Cat."—Ⓓ, represents the total percentage of students within the designated performance level.

The second chart, "Subtest Results"—Ⓔ, reports the total points and average points earned for each content standard.

The third chart, "Results for Subgroups of Students" (example on page 9)—Ⓕ, disaggregates student data in several ways—by gender, ethnicity, school programs, and so on. This data helps measure the effectiveness of instructional programs for different groups in a school. In addition, subgroup data identifies instructional practices and program characteristics that may be more effective. Finally, subgroup data enables educators to identify factors that appear to relate to performance, and to compare students statewide with respect to those factors.

Performance-level results were not reported if fewer than 10 students were assessed. Only the number of students ("N") in each category with fewer than 10 students assessed was reported.

School: Demonstration School 1
System: Demonstration District A
Grade: 07
Spring 2011

MontCAS CRT

School Summary Report

Reading

A → **I. Distribution of Scores**

Perf. Level	Scores	School N	School % of Students	School % of Students in Cat.	System N	System % of Students	System % of Students in Cat.	State N	State % of Students	State % of Students in Cat.
Advanced	298-300	2	14		5	18		3335	32	
Advanced	296-297	1	7		1	4		464	4	
Advanced	293-295	1	7	29	2	7	32	872	8	49
Advanced	291-292	0	0		0	0		0	0	
Advanced	288-290	0	0		1	4		414	4	
Proficient	280-287	3	21		4	14		1406	13	
Proficient	273-279	5	36	57	7	25	50	859	8	36
Proficient	265-272	0	0		1	4		654	6	
Proficient	258-264	0	0		0	0		362	3	
Proficient	250-257	0	0		2	7		452	4	
Nearing Proficiency	245-249	1	7	7	3	11	14	257	2	10
Nearing Proficiency	240-244	0	0		0	0		238	2	
Nearing Proficiency	235-239	0	0		0	0		242	2	
Nearing Proficiency	230-234	0	0		1	4		173	2	
Nearing Proficiency	225-229	0	0		0	0		168	2	
Novice	220-224	1	7	7	1	4	4	162	2	5
Novice	215-219	0	0		0	0		156	1	
Novice	210-214	0	0		0	0		60	1	
Novice	205-209	0	0		0	0		87	1	
Novice	200-204	0	0		0	0		92	1	

B → **C →** **D →**

E → **II. Subtest Results**

Reading	Possible Points	Average Points Earned School	Average Points Earned System	Average Points Earned State
Total Points	60	41	40	42
1. Students construct meaning as they comprehend, interpret, and respond to what they read	18	13	13	12
2. Students apply a range of skills and strategies to read	20	13	12	14
3. Students set goals, monitor, and evaluate their reading progress	This standard is not measurable in a statewide assessment.			
4. Students select, read, and respond to print and nonprint material for a variety of purposes	9	7	7	7
5. Students gather, analyze, synthesize, and evaluate information from a variety of sources, and communicate their findings in ways appropriate for their purposes and audiences	13	8	9	9

(Standards)

CRT Performance Level Descriptors

Advanced (288-300)
This level denotes superior performance.

Proficient (250-287)
This level denotes solid academic performance for each benchmark. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter.

Nearing Proficiency (225-249)
This level denotes that the student has partial mastery or prerequisite knowledge and skills fundamental for proficient work at each benchmark.

Novice (200-224)
This level denotes that the student is beginning to attain the prerequisite knowledge and skills that are fundamental for work at each benchmark.

MontCAS CRT

Reading

School Summary Report

F → III. Results for Subgroups of Students

Reporting Category	School					System					State				
	Number	% in N	% in NP	% in P	% in A	Number	% in N	% in NP	% in P	% in A	Number	% in N	% in NP	% in P	% in A
All Students	14	7	7	57	29	28	4	14	50	32	10453	5	10	36	49
Gender															
Male	7	*	*	*	*	14	0	21	64	14	5367	7	12	39	43
Female	7	*	*	*	*	14	7	7	36	50	5079	4	9	33	55
Ethnicity															
American Indian or Alaska Native	1	*	*	*	*	4	*	*	*	*	1203	15	22	40	23
Asian	0	*	*	*	*	1	*	*	*	*	93	4	5	32	58
Hispanic	3	*	*	*	*	4	*	*	*	*	301	7	15	43	35
Black or African American	0	*	*	*	*	1	*	*	*	*	122	4	17	42	37
Native Hawaiian or Other Pacific Islander	0	*	*	*	*	1	*	*	*	*	27	0	11	59	30
White	10	0	10	50	40	17	0	18	35	47	8700	4	8	35	53
Special Education	0	*	*	*	*	2	*	*	*	*	1107	28	30	34	8
Students with a 504 Plan	0	*	*	*	*	0	*	*	*	*	96	7	13	35	45
Title I (optional)	3	*	*	*	*	6	*	*	*	*	3473	9	16	40	35
Tested with Standard Accommodation	0	*	*	*	*	2	*	*	*	*	1156	24	31	35	10
Tested with Non-Standard Accommodation	0	*	*	*	*	1	*	*	*	*	50	26	36	36	2
Alternate Assessment	If a student in your system or school took the CRT-Alternate, please refer to Table III on the CRT-Alternate System or School Summary Report														
Migrant	0	*	*	*	*	1	*	*	*	*	12	17	8	58	17
Gifted/Talented	1	*	*	*	*	1	*	*	*	*	867	0	0	9	91
LEP/ELL	2	*	*	*	*	3	*	*	*	*	290	32	36	29	3
Former LEP Student	1	*	*	*	*	2	*	*	*	*	209	6	22	53	19
LEP Student Enrolled for First Time in a U.S. School	0	Performance levels are not reported for 1st year LEP students													
Free/Reduced Lunch	5	*	*	*	*	13	8	15	69	8	4313	9	16	42	33

*Less than ten (10) students were assessed

CRT Performance-Level Descriptors

Advanced

This level denotes superior performance.

Proficient

This level denotes solid academic performance for each benchmark. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter.

Nearing Proficiency

This level denotes that the student has partial mastery or prerequisite knowledge and skills fundamental for proficient work at each benchmark.

Novice

This level denotes that the student is beginning to attain the prerequisite knowledge and skills that are fundamental for work at each benchmark.

The above performance-level descriptors are general across all grades and content areas. Performance-level descriptors by grade were reviewed and revised for mathematics and reading during standard setting in the summer of 2006. Performance-level descriptors by grade for science were reviewed and revised during standard setting in the spring of 2008. Performance-level descriptors are available online at www.opi.state.mt.gov/assessment.

CRT Scaled Score Ranges for Performance Levels

Grade 3

Performance Level	Reading	Mathematics
Advanced	287–300	290–300
Proficient	250–286	250–289
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 4

Performance Level	Reading	Mathematics	Science
Advanced	289–300	291–300	281–300
Proficient	250–288	250–290	250–280
Nearing Proficiency	225–249	225–249	225–249
Novice	200–224	200–224	200–224

Grade 5

Performance Level	Reading	Mathematics
Advanced	287–300	289–300
Proficient	250–286	250–288
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 6

Performance Level	Reading	Mathematics
Advanced	289–300	287–300
Proficient	250–288	250–286
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 7

Performance Level	Reading	Mathematics
Advanced	288–300	289–300
Proficient	250–287	250–288
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 8

Performance Level	Reading	Mathematics	Science
Advanced	289–300	283–300	283–300
Proficient	250–288	250–282	250–282
Nearing Proficiency	225–249	225–249	225–249
Novice	200–224	200–224	200–224

Grade 10

Performance Level	Reading	Mathematics	Science
Advanced	289–300	281–300	269–300
Proficient	250–288	250–280	250–268
Nearing Proficiency	225–249	225–249	225–249
Novice	200–224	200–224	200–224

PART II: THE CRT-ALTERNATE REPORTS

CRT-ALTERNATE STUDENT REPORT

This parent/guardian report provides each student's scores for the reading, mathematics, and science tests. The chart on the back of the Student Report, "Your student's performance level and score in each content area," reflects the student's performance level—Ⓐ—and scaled score—Ⓑ—for reading, mathematics, and science. The gray bar surrounding the student's score represents the standard error of measurement. Below the chart is a detailed description of your student's performance in each content area—Ⓒ. Please refer to the performance-level descriptors on the front of the Student Report or on page 19 in this guide for additional information and resources.

Your student's performance level and score in each content area

Display of scores and probable range of scores

In the figure below your students performance is displayed. For each subject, the left column lists the possible performance levels with the scores needed to achieve those levels. The center column is your student's performance where the black bar is their score and the small grey bar is the range of scores they might have achieved had they taken the test multiple times. The right hand column is the percentage of students that achieved each performance level on the CRT-Alternate across the state.

Example:
Your child's --> 240 score

<-- Range of likely scores if your child took the test many times

Mathematics			Reading			Science		
Performance Levels	Student	State percentage	Performance Levels	Student	State percentage	Performance Levels	Student	State percentage
Advanced 278-300		32%	Advanced 275-300		53%	Advanced 271-300		32%
Proficient 250-277		40%	Proficient 250-274		30%	Proficient 250-270		40%
Nearing 225-249	247	19%	Nearing 225-249	254	7%	Nearing 225-249	244	19%
Novice 200-224		10%	Novice 200-224		10%	Novice 200-224		9%

Ⓐ

Ⓑ

Ⓑ

Ⓑ
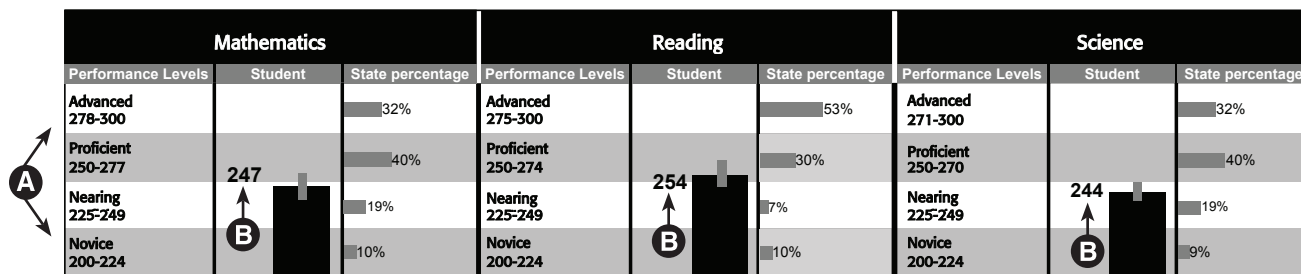
Your student's Mathematics Scaled Score is **247** which is at the **Nearing Proficiency Level.** Your student's possible range of scores is from 240 to 254.

The student at the Nearing Proficiency level, given moderate prompting, demonstrates the ability to respond accurately in performing a narrow set of contentspecific performance indicators.

- arrives at correct answer with moderate prompting
- identifies and/or recognizes a map and measuring tools
- demonstrates solid number concept for 1:1 correspondence (consistently touch counts)
- can count single digits
- can add single digits
- recognizes and understands some operational symbols
  (+, −, =), measurement symbols (in., cm, etc), and monetary symbols ($)
- basic understanding of bar graphs and data
- can make general statements about a bar graph

Your student's Reading Scaled Score is **254** which is at the **Proficient Level.** Your student's possible range of scores is from 247 to 261.

The student at the Proficient level, given limited prompting, demonstrates the ability to respond accurately in performing a wide variety of content-specific performance indicators.

- arrives at correct answer with limited prompting
- has basic word recognition
- tracks while reading or being read to
- identifies basic words and recognizes some words in different contexts
- identifies a word/picture/symbol for content communication
- identifies title and basic parts (beginning, middle, and end) of a reading selection
- identifies main idea of a story and some supporting facts/details
- identifies purposes of various texts (i.e., dictionary, map)

Your student's Science Scaled Score is **244** which is at the **Nearing Proficiency Level.** Your student's possible range of scores is from 239 to 249.

The student at the Nearing Proficiency level, given moderate prompting, demonstrates the ability to respond accurately in performing a narrow set of contentspecific performance indicators.

- can attend
- identifies correct answer out of two choices most of the time
- guess level performance
- limited understanding of content
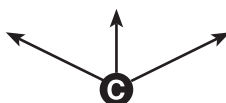
Ⓒ

The chart on the back of the Student Report, "Scores on Montana Content Standards," shows the standard for each content area assessed—**D**, points possible for the number of items (or questions) given—**E**, the raw score points earned by the student—**F**, and the range of points on that standard earned by students in Montana who achieved proficiency or above—**G**.

Scores on Montana Content Standards

CRT-Alternate results are reported for Montana Content Standards in Mathematics, Reading, and Science to provide standard-specific information about the student's achievement. The results can be used to show the student's relative performance on the standards within a content area.

Mathematics	Total Possible Points on the Test	Points Earned by Your Student	Range of Points Earned by Students Who Have Achieved Proficiency in the State
1. Problem Solving	This standard is assessed within the frameworks of standard 2-7.		
2. Numbers and Operations	32	10	19-32
6. Data Analysis, Statistics, and Probability	32	10	17-32
7. Patterns, Relations, and Functions	16	7	10-16

Reading	Total Possible Points on the Test	Points Earned by Your Student	Range of Points Earned by Students Who Have Achieved Proficiency in the State
1. Students contruct meaning as they comprehend, interpret, and respond to what they read.	36	7	29-36
2. Students apply a range of skills and strategies to read.	48	18	32-45
3. Students set goals, monitor, and evaluate their reading progress.	This standard is not measurable in a statewide assessment.		
4. Students select, read, and respond to print and nonprint material for a variety of purposes.	12	4	4-12
5. Students gather, analyze, synthesize, and evaluate information from a variety of sources, and communicate their findings in ways appropriate for their purposes and audiences.	4	1	3-4

Science	Total Possible Points on the Test	Points Earned by Your Student	Range of Points Earned by Students who have achieved proficiency in the State
1. Scientific Investigations	4	4	1-4
2. Physical Science	32	21	24-32
3. Life Science	20	11	13-20
4. Earth/Space Science	36	34	29-36
5. Impact on Society	Subscores are not reported for this standard.		
6. Historical Development	Subscores are not reported for this standard.		

CRT-ALTERNATE ROSTER & ITEM-LEVEL REPORT

The Roster & Item-Level Report is presented by content area and can be found on MARS. It provides information about class performance. Each student in the class is listed on the roster. Each item (performance indicator) on the test—Ⓐ, the Montana content standard each item is measuring—Ⓑ, the tasklet number—Ⓒ, and the total number of possible points (four for every item)—Ⓓ—are presented along the top of the roster. Beside the name of the student is the score the student received for each item—Ⓔ.

The columns on the right present the score on each content standard—Ⓕ, the scaled score for each student—Ⓖ, and the performance level—Ⓗ—the student attained. The end of the report lists the item average for students in the class—Ⓘ, school—Ⓙ, system—Ⓚ, and state—Ⓛ—who answered each item. A legend, with performance-level descriptors, is located on page 19 in this guide.

Confidential
Roster and Item-Level Report
Reading

CRT-Alternate

Class:	DEMA
School:	Demonstration School 1
System:	Demonstration District A
Grade:	07

Page: 1 of 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Standard 1	Standard 2	Standard 3	Standard 4	Standard 5	Total Points Earned	Scaled Score	Performance Level
Ⓐ Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25								
Ⓑ Content Standard	1	2	2	2	4	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	5	5	5	5								
Ⓒ Tasklet	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	5	5	5	5	5								
Ⓓ Total Possible Points	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	52	28		4	16	100		
XX Ⓔ	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	52	28		4	16	100	300	A
XX ¥ XX	4	2	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	4	4	4	52	25		4	14	95	283	A
Ⓘ Class Average	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	52	28		4	16	100		
Ⓙ School Average	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	52	28		4	16	100		
Ⓚ System Average	4	2.9	2.6	2.7	2.9	3.6	3.4	3.4	3.5	3.2	4	3.5	3.5	3.1	3.3	4	3.1	2.8	3.3	3.4	4	3.2	3.3	3	3.6	44	21		3	12	80		
Ⓛ State Average	4	2.9	2.4	2.9	2.9	4	3.5	3.2	3.6	3.4	4	3.6	3.6	3.3	3.5	3.9	3.2	3.2	3.2	3.4	4	3.1	3.4	3.1	3.6	48	21		3	13	85		

Total Test Results — Ⓕ Points Earned by Standard; Ⓖ Scaled Score; Ⓗ Performance Level

Standard 3: This standard is not measurable in a statewide assessment.

The sum of the points for each standard may exceed the total points, as some items correlate with more than one standard.

† Student did not complete the assessment.   ¥ Not in school and/or system for full academic year.

§ Teacher halted the administration of one or more of the five tasklets after the student scored a 0 for three consecutive items within a tasklet on two different test administrations. Any completed tasklets have been scored and are reflected in the student's scaled score.

CRT-Alternate School and System Summary Reports

The School and System Summary Reports (example on page 17) are presented by content area and provide information at the school and system level. These reports can be found on MARS. The first chart, "Distribution of Scores"—**A**, shows the distribution of scores in each performance level: Advanced (A), Proficient (P), Nearing Proficiency (NP), and Novice (N). The first column, "Scores"—**B**, represents the scaled score.

The "School," "System," and "State" columns are each divided into three columns that represent the number of students ("N") and the percentage of students receiving each scaled score point—**C**. The last column, "% of Students in Cat."—**D**, represents the total percentage of students within the designated performance level.

The second chart, "Subtest Results"—**E**, reports the total points and average points earned for each content standard.

The third chart, "Results for Subgroups of Students" (example on page 18)—**F**, disaggregates student data in several ways—by gender, ethnicity, school programs, and so on. This data helps measure the effectiveness of instructional programs for different groups in a school. In addition, subgroup data identifies instructional practices and program characteristics that may be more effective. Finally, subgroup data enables educators to identify factors that appear to relate to performance, and to compare students statewide with respect to those factors.

Performance-level results were not reported if fewer than 10 students were assessed. Only the number of students ("N") in each category with fewer than 10 students assessed was reported.

School: Demonstration School 1
System: Demonstration District A
Grade: 07
Spring 2011

MontCAS
CRT-Alternate

Reading | School Summary Report

A → I. Distribution of Scores

Perf. Level	Scores	School			System			State		
		N	% of Students	% of Students in Cat.	N	% of Students	% of Students in Cat.	N	% of Students	% of Students in Cat.
Advanced	296–300	1	100	100	1	9	55	3	3	60
	291–295	0	0		0	0		0	0	
	287–290	0	0		0	0		3	3	
	282–286	0	0		4	36		33	32	
	277–281	0	0		1	9		23	22	
Proficient	272–276	0	0	0	0	0	18	11	11	31
	266–271	0	0		0	0		9	9	
	261–265	0	0		0	0		6	6	
	255–260	0	0		2	18		3	3	
	250–254	0	0		0	0		3	3	
Nearing Proficiency	245–249	0	0	0	2	18	27	3	3	10
	240–244	0	0		1	9		2	2	
	235–239	0	0		0	0		0	0	
	230–234	0	0		0	0		5	5	
	225–229	0	0		0	0		0	0	
Novice	220–224	0	0	0	0	0	0	0	0	0
	215–219	0	0		0	0		0	0	
	210–214	0	0		0	0		0	0	
	205–209	0	0		0	0		0	0	
	200–204	0	0		0	0		0	0	

B → C → D → C → D → C → D →

E → II. Subtest Results

Reading	Possible Points	Average Points Earned		
		School	System	State
Total Points*	100	100	80	85
1. Students construct meaning as they comprehend, interpret, and respond to what they read	52	52	44	48
2. Students apply a range of skills and strategies to read	28	28	21	21
3. Students set goals, monitor, and evaluate their reading progress	This standard is not measurable in a statewide assessment.			
4. Students select, read, and respond to print and nonprint material for a variety of purposes	4	--	--	--
5. Students gather, analyze, synthesize, and evaluate information from a variety of sources, and communicate their findings in ways appropriate for their purposes and audiences	16	16	12	13

--There were too few score points to report on this standard, or no items on the test measured this standard.

CRT-Alternate Performance Level Descriptors

Advanced (277–300)
The student at the Advanced level accurately and independently demonstrates the ability to carry out comprehensive content specific performance indicators.
Proficient (250–276)
The student at the Proficient level, given limited prompting, demonstrates the ability to respond accurately in performing a wide variety of content specific performance indicators.
Nearing Proficiency (225–249)
The student at the Nearing Proficiency level, given moderate prompting, demonstrates the ability to respond accurately in performing a narrow set of content specific performance indicators.
Novice (200–224)
The student at the Novice level, given physical assistance and/or modeling, is supported to participate in content specific performance indicators.

*The sum of the points for each standard may exceed the total points, as some items correlate with more than one standard.

MontCAS CRT-Alternate

Reading

School Summary Report

School: Demonstration School 1
System: Demonstration District A
Grade: 07
Spring 2011

III. Results for Subgroups of Students

Reporting Category	School					System					State				
	Number	% in N	% in NP	% in P	% in A	Number	% in N	% in NP	% in P	% in A	Number	% in N	% in NP	% in P	% in A
All Students	1	*	*	*	*	11	0	27	18	55	104	0	10	31	60
Gender															
Male	0	*	*	*	*	6	*	*	*	*	67	0	13	31	55
Female	1	*	*	*	*	5	*	*	*	*	36	0	3	31	67
Ethnicity															
American Indian or Alaska Native	0	*	*	*	*	2	*	*	*	*	19	0	16	26	58
Asian	0	*	*	*	*	0	*	*	*	*	0	*	*	*	*
Hispanic	0	*	*	*	*	1	*	*	*	*	2	*	*	*	*
Black or African American	0	*	*	*	*	0	*	*	*	*	2	*	*	*	*
Native Hawaiian or Other Pacific Islander	0	*	*	*	*	0	*	*	*	*	0	*	*	*	*
White	0	*	*	*	*	7	*	*	*	*	80	0	8	33	60
Special Education	0	*	*	*	*	9	*	*	*	*	101	0	10	32	58
Students with a 504 Plan	0	*	*	*	*	0	*	*	*	*	0	*	*	*	*
Title I (optional)	0	*	*	*	*	4	*	*	*	*	30	0	20	37	43
Migrant	0	*	*	*	*	0	*	*	*	*	0	*	*	*	*
Gifted/Talented	0	*	*	*	*	0	*	*	*	*	0	*	*	*	*
LEP/ELL	0	*	*	*	*	1	*	*	*	*	4	*	*	*	*
Former LEP Student	0	*	*	*	*	1	*	*	*	*	3	*	*	*	*
LEP Student Enrolled for First Time in a U.S. School	0	Performance levels are not reported for 1st year LEP students				5					60				
Free/Reduced Lunch	0	*	*	*	*	5	*	*	*	*	60	0	10	28	62

*Less than ten (10) students were assessed

2011 MontCAS CRT and CRT-Alternate Interpretive Guide

CRT-Alternate Performance-Level Descriptors

Advanced

The student at the Advanced level accurately and independently demonstrates the ability to carry out comprehensive content-specific performance indicators.

Proficient

The student at the Proficient level, given limited prompting, demonstrates the ability to respond accurately in performing a wide variety of content-specific performance indicators.

Nearing Proficiency

The student at the Nearing Proficiency level, given moderate prompting, demonstrates the ability to respond accurately in performing a narrow set of content-specific performance indicators.

Novice

The student at the Novice level, given physical assistance and/or modeling, is supported to participate in content-specific performance indicators.

The above performance-level descriptors are general across all grades and content areas. Performance-level descriptors for each grade and content area were reviewed and revised throughout a series of standard-setting meetings that occurred between 2006 and 2009. Performance-level descriptors are available online at www.opi.state.mt.gov/assessment.

CRT-ALTERNATE SCALED SCORE RANGES FOR PERFORMANCE LEVELS

Grade 3

Performance Level	Reading	Mathematics
Advanced	265–300	269–300
Proficient	250–264	250–268
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 4

Performance Level	Reading	Mathematics	Science
Advanced	267–300	269–300	274–300
Proficient	250–266	250–268	250–273
Nearing Proficiency	225–249	225–249	225–249
Novice	200–224	200–224	200–224

Grade 5

Performance Level	Reading	Mathematics
Advanced	263–300	297–300
Proficient	250–262	250–296
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 6

Performance Level	Reading	Mathematics
Advanced	275–300	258–300
Proficient	250–274	250–257
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 7

Performance Level	Reading	Mathematics
Advanced	277–300	275–300
Proficient	250–276	250–274
Nearing Proficiency	225–249	225–249
Novice	200–224	200–224

Grade 8

Performance Level	Reading	Mathematics	Science
Advanced	275–300	278–300	271–300
Proficient	250–274	250–277	250–270
Nearing Proficiency	225–249	225–249	225–249
Novice	200–224	200–224	200–224

Grade 10

Performance Level	Reading	Mathematics	Science
Advanced	283–300	261–300	269–300
Proficient	250–282	250–260	250–268
Nearing Proficiency	225–249	225–249	225–249
Novice	200–224	200–224	200–224

APPENDIX A

Overview of Assessment Instruments and Procedures
MontCAS CRT and CRT-Alternate of 2011

MONTANA EDUCATOR INVOLVEMENT IN TEST DEVELOPMENT

Montana educators were actively involved in each aspect of test development—from the development of *MontCAS Comprehensive Assessment System Grade Level Expectations (GLEs)* to the review of all passages and items for bias and sensitivity issues, as well as review of all items for purposes of alignment, depth of knowledge, age appropriateness, and accuracy of content. Standards were set for both the CRT and the CRT-Alternate by committees comprised of Montana educators. Standards for math and reading were set during the summer of 2006. Standards for science were set in the spring of 2008.

GRADE-LEVEL LEARNING EXPECTATIONS DEVELOPMENT

OPI developed GLEs in mathematics, reading, and science in response to the requirements of the federally mandated *No Child Left Behind Act of 2001* to test all students, beginning in the 2005–2006 academic year, in each of grades 3–8 and 10 in mathematics and reading. Science was included in the test beginning in the spring of 2008. Although these sets of GLEs were developed for this purpose, the intent was to build coherent sets of expectations that would focus, not narrow, the curricula, would support good instruction, and would be aligned with Montana's standards.

In the 2004–2005 academic year, reading and math GLEs were expanded to include students with significant cognitive disabilities. Similarly, in the 2006–2007 academic year, the same was done for the new content area, science. The resulting documents—*Montana Standards and Expanded Benchmarks for Reading*, *Montana Standards and Expanded Benchmarks for Math*, and *Montana Standards and Expanded Benchmarks for Science*—were used as a framework to create the CRT-Alternate Assessment.

Throughout the development process of both the *MontCAS Comprehensive Assessment System Grade Level Expectations* and the *Montana Standards and Expanded Benchmarks* documents, OPI has relied upon the expertise of Montana educators. These educators have helped guide the development of these documents and have made numerous insightful contributions in an effort to help support meaningful instruction in mathematics, reading, and science.

ITEM REVIEW COMMITTEE

A committee of local educators is convened annually to review all of the items developed for the CRT and the CRT-Alternate Assessment. Committee member comments are solicited for each item. Each item is evaluated on the following criteria:

- alignment with the standard being measured,
- appropriateness for grade level,
- content accuracy, and
- depth of knowledge.

Bias and Sensitivity Committee

A committee of Montana educators also meets to review all reading passages and individual test items. Committee members determine if a passage or item is likely to place a particular group of students at an advantage or disadvantage for non-educational reasons; if so, a decision will be made to remove or revise the passage or item by OPI.

Technical Advisory Committee

A committee of nationally recognized test and measurement experts (psychometricians) meets regularly to ensure the technical integrity of the CRT and the CRT-Alternate Assessment.

CRT Test Design

Types of Items on CRT

In order to provide a valid assessment of students' attainment of the Montana standards and GLEs, a variety of item types needed to be used. Therefore, multiple-choice items, short-answer items, and constructed-response items were used as follows.

Multiple Choice (one point)

Multiple-choice items are efficient for testing a broad array of content in a relatively short time span.

Short Answer (one point—mathematics only)

These open-ended items ask students to generate a short response to a mathematics computation question.

Constructed Response (four points)

This is a more complex item type that requires students to give longer responses to items related to reading passages or to solve multistep mathematics problems.

Common and Field Test Items

There are four versions, or forms, of the CRT created for each grade level tested in reading, mathematics, and science. Half of the items in each of the CRT forms were the same in every form, or were "common" to all forms of the test. All individual student results (performance levels, scaled scores, content area subscores) and school results are based only on common items. The other half of the items in each form were field tested. "Field testing" means distributing a large number of items among the different forms of the test. This approach allows for field testing of new items for subsequent years' tests and also allows some items to be administered in successive years for purposes of equating the tests from year to year.

Following each year's test administration, 50% all common items are publicly released to inform local curriculum and instruction. Released common items are replaced each year with some of the items from the previous year's field tested section.

CRT-Alternate Test Design

To provide an option for participation of all students in the state's accountability system, including those for whom a paper-and-pencil test is not appropriate, Montana has developed the CRT-Alternate Assessment. It is expected that only Individuals with Disabilities

Education Act (IDEA)–eligible students with the most significant cognitive disabilities will participate in the CRT-Alternate. The CRT-Alternate consists of test activities in reading and math for students in grades 3–8 and 10, and in science for grades 4, 8, and 10. The components of the test are identified below to provide an overview of the test and an introduction to terminology used to describe the test's structure. Each component of the test is described in detail in the *CRT-Alternate Administration Manual.*

RUBRIC

The scoring rubric is a matrix that describes various levels of achievement for each test item. It incorporates increasing levels of teacher support designed to elicit a correct response from the student. The rubric incorporates a numerical scale that extends from 0 to 4.

SCORING

The scoring system is guided by the rubric. Student performance on each item is scored based on the amount of assistance required to elicit the correct response. Scoring rules guide the administrator if the student is unresponsive, uncooperative, or repeatedly unsuccessful with test items.

SCAFFOLDING

Scaffolding is a systematic process of providing increasing levels of assistance on each test item. The test booklet provides teacher instruction and suggested language to scaffold each test item.

SCORING

In May 2011, more than 800,000 Montana responses were processed and scored at Measured Progress. The scoring activities that were used to produce the results for the CRT reports are described below.

Scoring was separated into the following three major tasks:

- scoring of responses to multiple-choice items,
- scoring of responses to short-answer items, and
- scoring of responses to constructed-response items.

SCORING OF MULTIPLE-CHOICE ITEMS

Multiple-choice items were machine-scored using digital scanning equipment. Correct responses were assigned a score of 1 point each; incorrect or blank responses were assigned a score of 0 points each.

SCORING OF SHORT-ANSWER AND CONSTRUCTED-RESPONSE ITEMS

Short-answer and constructed-response items were scored by Measured Progress. Short-answer items were given a score of 0 or 1. Constructed-response items were given a score from 0 to 4. A score of 0 is given when a student produces some work, but the work is totally wrong or irrelevant, or if he or she leaves the item blank. For purposes of aggregating item results, blanks and scores of 0 both count as 0 points toward a student's score.

The work in preparation for scoring student responses included

- development of scoring guides (rubrics) by content specialists (educators) from the Montana and Measured Progress test developers and
- selection of "benchmark" responses— examples of student work at different score points for each item—that were used in training and continuous monitoring of scorer accuracy.

Scorer training consisted of

- review of each item and its related content and performance standard,
- review and discussion of the scoring guide and multiple sets of benchmark responses for each score point, and
- qualifying rounds of scoring in which scorers needed to demonstrate a prescribed level of accuracy.

Setting Standards for Performance on the CRT and CRT-Alternate Tests

Standard setting is the process of determining the minimum or "threshold" score for each performance level, grade, and subject for which results are reported. The multistep process of setting standards for the CRT and the CRT-Alternate Assessment began with creation of performance-level descriptors.

Standard-setting panels were convened at each grade level in reading and mathematics (grades 3–8 and 10) and science (grades 4, 8, and 10).

More than 400 Montana educators, invited to participate by OPI, have composed standard-setting panels in order to set standards in each content area.

In 2008, OPI convened panels of educators to participate in a standard-setting process for the CRT and CRT-Alternate science assessments in grades 4, 8, and 10. Standards were set for reading and mathematics during the summer of 2006 for both the CRT and the CRT-Alternate Assessment in grades 3–8 and 10. In May 2009, an additional standards validation for the CRT-Alternate occurred for grades 4, 8, and 10 in reading and mathematics due to redevelopment in those grades and content areas.

A challenging aspect of standard setting is that many methods exist to set standards and establish cut points. With this in mind, OPI, in consultation with the Technical Advisory Committee and Measured Progress, determined that judgments would be employed for setting standards on the tests.

Upon completion of the data-gathering phases of standard setting described above and recommendations from the Technical Advisory Committee, the state superintendent of the Office of Public Instruction approved the recommended cut points.

CRT: Bookmark Standard-Setting Process

The bookmark method of standard setting is a multistep process. First, participants took the CRT as though they were students. Then, as a group, the panels reviewed the performance-level descriptors, paying special attention to

differentiating between knowledge, skills, and abilities typically associated with students described as being on the borderline between performance levels. Panelists then looked at "ordered item booklets," which show each common item on the test in order from easiest to hardest. The ordered item booklets also includes actual student work samples for each score point for constructed-response items. Participants made decisions about which items would differentiate between students at each performance level and placed a "bookmark" between those items to represent the cut point between performance levels. Small- and large-group discussions followed regarding the knowledge, skills, and abilities associated with the items around each cut point. Participants had the opportunity to change their placement of the bookmark based on these discussions. Finally, panelists had the opportunity to provide feedback on the performance-level descriptors.

CRT-Alternate: Body of Work Standard-Setting Process

The body-of-work method of standard setting for the alternate assessment is a multistep process. First, participants reviewed the CRT-Alternate Assessment and the scoring rubric, which determined how various responses to each item were scored. Then, as a group, the panelists reviewed the performance-level descriptors, paying special attention to differentiating between knowledge, skills, and abilities typically associated with students assigned to each of the performance levels. Panelists then looked at "ordered item lists," which show each common item on the test in order from easiest to hardest. The Ordered Item List participants were also given a set

of student profiles, which showed the average response on each item of the entire test for students who received a score within a specific range. Participants reviewed each of the student profiles and made an individual determination as to which performance level each student profile should be assigned. Large-group discussions followed regarding the knowledge, skills, and abilities associated with the student profiles in each performance level. Participants had the opportunity to change their placement of any or all student profiles based on these discussions. Finally, panelists had the opportunity to provide feedback on the performance-level descriptors.

Reporting

The tests were designed to measure student performance against the learning goals described in *Montana Content Standards*. Consistent with this purpose, primary results on the tests are reported in terms of performance levels that describe student performance in relation to these established state standards. There are four performance levels: Advanced, Proficient, Nearing Proficiency, and Novice. Students receive a separate performance-level classification (based on total scaled score) in each content area (mathematics, reading, and science) in which they complete a test. There is no overall classification of student performance across content areas. School- and system-level results are reported as the number and percentage of students attaining each performance level at each grade level tested.

In addition to performance levels, CRT and CRT-Alternate results are also reported as scaled scores. The major purpose of including

scaled scores in reports is to enhance the level of feedback provided to students, parents, and teachers. Each of the four performance levels encompasses a range of student performance. A student whose test performance is just above Nearing Proficiency and a student whose level of performance is slightly below Proficient are both classified as Nearing Proficiency. However, scaled-score results are more precise since they pinpoint a student's performance (score) on the continuum of scores within the performance levels. The additional information provided by scaled scores is critical in forming the most accurate impression of performance possible.

Translating Raw Scores to Scaled Scores and Performance Levels

CRT and CRT-Alternate scores in each content area are reported on a scale that ranges from 200 to 300. Scaled scores supplement the performance-level results by providing information about the position of a student's results within a performance level. School- and system-level scaled scores are calculated by computing the average of student-level scaled scores. Students' raw scores, or total number of points, on the tests are translated to scaled scores using a data-analysis process called scaling. Scaling simply converts raw points from one scale to another. In the same way that the same temperature can be expressed on either the Fahrenheit or Celsius scales and the same distance can be expressed either in miles or kilometers, student scores on the tests could be expressed as raw scores (i.e., number right) or scaled scores.

It is important to note that converting from raw scores to scaled scores does not change the students' performance-level classifications. Given the relative simplicity of raw scores, it is fair to question why scaled scores are used in reports instead of raw scores. Foremost, scaled scores offer the advantage of simplifying the reporting of results across content areas, grade levels, and subsequent years. Because the standard-setting process typically results in different cut scores across content areas on a raw score basis, it is useful to transform these raw cut scores to a scale that is more easily interpretable and consistent. Using scaled scores greatly simplifies the task of understanding how a student performed.